New MOST Course: Landscaping for Resilience in a Changing Climate

Regional Environmental Committee February 6, 2020 Jill Sunderland



https://mostcenter.org/

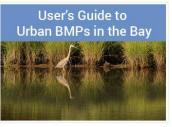
COURSE CATALOG





















The Building Blocks of an Effective Stormwater **Management Program**





Landscaping for Resilience in a Changing Climate

- Landscape pros, non-profits, and local govt
- Developed by CBLP and Univ. of Maryland Ext.
- Featured presenters:
 - Dave Hirschman
 - Tim Stromberg









Landscaping for Resilience in a Changing Climate

- Climate Change in the Ches Bay Watershed
- Climate Impacts of Sustainable Landscape Practices
- Climate Change and Native Plants
- Climate Impacts on Stormwater
- Impacts of Climate Change at the Water's Edge





Climate Impacts on Stormwater

- More frequent extreme storms and more rain
- Design considerations
 - Use natural areas
 - Plan for increased storage volume
 - Plan for maintenance
 - Use treatment trains
 - Green infrastructure for smaller storm events



Green Infrastructure at Work

LOWER URBAN HEAT



reduce the energy needed for cooling on the floor below the roof by more than Emol.

WATER LOCAL



urbanized Southern California and the San Francisco Bay area could boost water supplies by up to 200 billion gallons per year - as much water as the city of Los Angeles uses annually.6

BUILD COASTAL



Research suggests that wave height can be reduced by 50% within the first 16 feet of marsh and 95% after crossing 100 feet of marsh?

MANAGE FLOOD RISK

A study in Burnsville, MN showed a 93 neduction in runoff volume after the installation of 17 rain eardens in a 5.3 acre neighborhood.*



USE LESS ENERGY

can produce cooling effects equivalent to 20 hours a day.9

\$EPA

For more information on green infrastructure, see: www.epa.gov/greeninfrastructure

- k. www.nrdc.org/water/files/ca-water-supply-solutions-stormwater-IB.pdf
- Sporting alternificra Marshes, Wetlands, 2:87-104 8. www.ci.burnsville.mn.us/DocumentCenter/Home/View/44
- 9. www.arborday.org/trees/benefits.cfm

Impacts of Climate Change at the Water's Edge

- Higher storm surge, expanded flood zones, tidal wetlands drowning, increased polluted runoff, loss of agric lands, fluctuations in salinity, etc.
- Design strategies
 - Combine nature-based and engineered solutions
 - Connect green infrastructure
 - Emphasize the role of trees as pumps
- Example Norfolk's Thrive Project



DEQ Continuing Education Credits

Building Blocks of an Effective SW Mgmt Program	2 hours	Inspectors and Administrators
Dig Once	1.5 hours	Inspectors and Administrators
Economic Ecology	2.5 hours	Inspectors and Administrators
ESC for Construction Sites	2 hours	Inspectors and Administrators
Green Infrastructure and LID 101	2 hours	Inspectors and Administrators
Landscaping for Resilience in a Changing Climate	2 hours	Inspectors and Administrators
Landscaping for Resilience in a Changing Climate User's Guide to Urban BMPs in the Bay	2 hours 2 hours	Inspectors and Administrators Inspectors and Administrators
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